Calculate the pH of a 0.100 M HF solution pH = 2.10

$$\% \text{ ionization} = \frac{[H^+]}{[HF]} \times 100 = \frac{7.91 \times 10^{-3}}{0.10} \times 100 = 7.91\ \%$$

Calculate the pH of a 0.010 M HF solution pH = 2.64

$$[H^+] = 2.3 \times 10^{-3}$$

$$\% \text{ ionization} = \frac{2.3 \times 10^{-3}}{0.010} \times 100 = 23\%$$

$$HF\ (aq) \leftrightarrows H^+\ (aq) + F^-\ (aq)$$

1 mol solute 2 mol solute

increase concentration